

REMARKS

Summary of the Office Action

Claims 1-64 have been considered in the Office Action.

Claims 2-3, 12-13, 22-23, 31-32, 41-42 and 51-52 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, the Office action states that the cited claims includes references to surrounding pixels comprising circular or elliptical shapes, but the Examiner has been unable to find explicit and sufficient support for such claim elements.

Claims 5-7, 10, 15-17, 20, 25-27, 29, 34-36, 39, 44-46, 49, 54-56 and 58 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In particular, the Office action states that claims 10, 20, 29, 39, 49 and 58 recite “the colorant value” may refer to “the surrounding pixel,” “the first pixel,” or both. Further, the Office action states that claims 5-7, 15-17, 25-27, 34-36, 44-46 and 54-56 variously recite “determining a sum of magnitudes of differences,” “determining a magnitude of a sum of differences,” and “determining a difference between a sum of magnitude of differences,” but the differences between these phrases are difficult to distinguish from one another.

Claims 1-7, 9-17, 19-36, 38-46, 48-59 and 61-64 have been rejected under 35 U.S.C. § 102(b) as anticipated by Morgana U.S. Patent No. 6,377,711 (“Morgana”).

Claims 8, 18, 37 and 47 have been rejected under 35 U.S.C. § 103(a) as obvious over Moranga and Geurts et al. U.S. Patent Publication No. 2001/0055130 (“Geurts”).

Claim 60 has been rejected under 35 U.S.C. § 103(a) as obvious over Moranga and Nhu U.S. Patent No. 5,848,224 (“Nhu”).

Reply to the § 112, first paragraph Rejections

Applicants have amended claims 2-3, 12-13, 22-23, 31-32, 41-42 and 51-52 to more particularly describe the invention. In particular, the amended claims specify that the plurality of surrounding pixels comprise a trapping window that has an elliptical or a circular shape. Support for the claim amendments may be found at least at page 8,

line 15 through page 9, line 2. Applicants respectfully request that the Examiner withdraw the § 112, first paragraph rejections.

Reply to the § 112, second paragraph Rejections

A. Colorant Values

All of the pending claims recite the term “colorant values,” and claims 10, 20, 29, 39, 49 and 58 specify that “the colorant values” (not “the colorant value,” as specified in the Office action) comprise cyan, magenta, yellow and black colorants. Applicants respectfully submit that claims 10, 20, 29, 39, 49 and 58 are not indefinite, and respectfully request that the Examiner withdraw the § 112, second paragraph rejections of these claims.

B. Differences

Claims 5, 15, 25, 34, 44 and 54 recite “a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.” Claims 6, 16, 26, 35, 45 and 55 recite “a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.” Claims 7, 17, 27, 36, 46 and 56 recite “a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.” Applicants respectfully submit that the existing claim language is clear. Exemplary embodiments of the claimed invention may be found at least at page 10, line 25 through page 11, line 15. Accordingly, applicants respectfully request that the Examiner withdraw the § 112, second paragraph rejections of these claims.

Reply to the § 102(b)/§ 103(a) Rejections

Independent claims 1, 11, 21, 30, 40, 50 and 59 recite methods and apparatus for electronically trapping a first digital color image pixel including a plurality of colorant values, the methods and apparatus: (1) identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant

values, (2) identifying one of the surrounding pixels to control trapping of the first pixel, and (3) trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel. The cited references do not describe or suggest the claimed invention.

Morgana describes a trapping process that uses diagonal edge detection. (Col. 4, lines 19-21). In particular, a target pixel of an image is selected, first and second pixels diagonally adjacent to the target pixel are selected, edge detection is performed using the first and second pixels and the target pixel, and if one or more edges are detected, conventional trapping is performed.

Unlike the claimed invention, Morgana does not describe or suggest anything about identifying one of the surrounding pixels to control trapping of a first pixel, or trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel. Indeed, the Office action seems to gloss over this element, and does not identify any such teaching in Morgana.

Because Morgana does not describe the claimed invention, applicants respectfully request that the Examiner withdraw the § 102(b) rejections of claims 1, 11, 21, 30, 40, 50 and 59. Because all other claims depend from one of the independent claims, applicants further respectfully request that the Examiner withdraw the § 102(b) and § 103(a) rejections of all other claims.

Conclusion

For the reasons stated above, applicants submit that this application, including claims 1-64, is allowable. Applicants therefore respectfully request that the Examiner allow this application.

Respectfully submitted,

/James Trosino, Reg. # 39,862/
James Trosino
Attorney for Applicants